



BILLING CODE: 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC636

Endangered and Threatened Species; Take of Anadromous Fish

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Applications for four new scientific research permits, six permit modifications, and five research permit renewals.

SUMMARY: Notice is hereby given that NMFS has received 15 scientific research permit application requests relating to Pacific salmon, sturgeon, and eulachon. The proposed research is intended to increase knowledge of species listed under the Endangered Species Act (ESA) and to help guide management and conservation efforts. The applications may be viewed online at:

https://apps.nmfs.noaa.gov/preview/preview_open_for_comment.cfm

DATES: Comments or requests for a public hearing on the applications must be received at the appropriate address or fax number (see ADDRESSES) no later than 5 p.m. Pacific standard time on [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Written comments on the applications should be sent to the Protected Resources Division, NMFS, 1201 NE Lloyd Blvd., Suite 1100, Portland, OR 97232-1274. Comments may also be sent via fax to 503-230-5441 or by e-mail to nmfs.nwr.apps@noaa.gov.

FOR FURTHER INFORMATION CONTACT: Rob Clapp, Portland, OR (ph.: 503-231-2314),
Fax: 503-230-5441, e-mail: Robert.Clapp@noaa.gov). Permit application instructions are
available from the address above, or online at <https://apps.nmfs.noaa.gov>.

SUPPLEMENTARY INFORMATION:

Species Covered in This Notice

The following listed species are covered in this notice:

Chinook salmon (*Oncorhynchus tshawytscha*): threatened California Coastal (CC);
threatened Central Valley spring-run (CVS); threatened Lower Columbia River (LCR);
threatened Puget Sound (PS); endangered Sacramento River winter-run (SRW); threatened
Snake River (SR) fall-run; threatened SR spring/summer-run (spr/sum); endangered Upper
Columbia River (UCR) spring-run; threatened Upper Willamette River (UWR).

Steelhead (*O. mykiss*): threatened UCR; threatened SR; threatened middle Columbia
River (MCR); threatened California Central Valley (CCV); threatened Central California Coast
(CCC); threatened LCR; threatened Northern California (NC); threatened PS; threatened South-
Central California Coast (SCC); endangered Southern California (SC); threatened UWR.

Sockeye salmon (*O. nerka*): endangered SR; threatened Ozette Lake (OL).

Chum salmon (*O. keta*): threatened Columbia River (CR); threatened Hood Canal
summer-run (HCS).

Coho salmon (*O. kisutch*): Endangered CCC; threatened LCR; threatened Oregon Coast
(OC); threatened Southern Oregon/Northern California Coast (SONCC).

Eulachon (*Thaleichthys pacificus*): threatened southern (S).

Green sturgeon (*Acipenser medirostris*): threatened southern (S).

Authority

Scientific research permits are issued in accordance with section 10(a)(1)(A) of the ESA (16 U.S.C. 1531 et. seq) and regulations governing listed fish and wildlife permits (50 CFR 222-226). NMFS issues permits based on findings that such permits: (1) are applied for in good faith; (2) if granted and exercised, would not operate to the disadvantage of the listed species that are the subject of the permit; and (3) are consistent with the purposes and policy of section 2 of the ESA. The authority to take listed species is subject to conditions set forth in the permits.

Anyone requesting a hearing on an application listed in this notice should set out the specific reasons why a hearing on that application would be appropriate (see ADDRESSES). Such hearings are held at the discretion of the Assistant Administrator for Fisheries, NMFS.

Applications Received

Permit 1422 – 3R

The U.S. Forest Service (USFS) is seeking to renew for five years a permit that currently allows them to annually take juvenile endangered UCR Chinook salmon, juvenile endangered UCR steelhead, and juvenile threatened MCR steelhead during research activities taking place at various points in the Yakima, Methow, Entiat, and Wenatchee River drainages in Washington State. Under the renewed permit, the fish would be captured (using minnow traps, hook-and-line angling, and electrofishing equipment), identified, and immediately released. The purpose of the research is to determine fish distribution in the subbasins listed above. The research would benefit the fish by giving land managers information they need in order to design forest management activities (e.g., timber sales, grazing plans, road building) in such a way as to conserve listed species. The USFS does not intend to kill any of the listed fish being captured, but a small percentage may die as an unintended result of the research activities.

Permit 10020-3M

The City of Bellingham (COB) is seeking to modify a five-year research permit that currently allows them to take juvenile PS Chinook salmon and PS steelhead. The sampling would take place in Cemetery Creek, a tributary of Whatcom Creek in Bellingham, WA. The purpose of the study is to assess the effectiveness of habitat restoration measures implemented as part of the Whatcom Creek Long-term Restoration Plan and would document fish population trends. The COB proposes to capture fish using a smolt trap placed in Cemetery Creek. Fish would be identified by species, measured, have a tissue sample taken (to determine their origin), and be released. This research would benefit the affected species by informing future restoration designs as well as providing data to support future enhancement projects. The researchers do not propose to kill any of the listed salmonids being captured, but a small number may die as an unintended result of the activities.

Permit 10042 – 3R

The U.S. Geological Survey (USGS) is seeking to renew for five years a permit that currently allows them to take all the Columbia, Snake, and Willamette River fish (including green sturgeon) listed in this notice while conducting studies of the interactions between American shad (*Alosa sapidissima*) and salmonid restoration efforts in the lower Columbia River. The purpose of the study is to determine how shad benefit or detract from salmonid restoration programs. A secondary purpose is to collect large-scale suckers for contaminant analysis. The listed fish will benefit from these efforts as managers learn how the non-native shad affect listed salmonids and the programs designed to restore them. The applicant proposes to capture the fish using a variety of methods: gillnetting, electrofishing, angling, seines, cast nets, and hook-and-line angling. All listed fish captured during the research would be

immediately returned to the water at the point of capture. The applicant does not propose to kill any listed fish, but a small number may die as an unintended result of the activities.

Permit 14283 – 2R

Environmental Assessment Services (EAS) is seeking to renew for five years a permit that currently allows them to annually take listed fish in the Columbia River in support of the U.S. Department of Energy's Hanford Site Cleanup Mission and regulatory drivers under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The research would take place in four areas the Columbia River waters extending from upstream of Wanapum Dam to McNary Dam. The researchers are targeting non-listed resident fish but may also capture UCR steelhead and Chinook, MCR steelhead, and SR fall Chinook, SR spr/sum Chinook, and SR Steelhead. The research would benefit listed fish by helping monitor and reduce contamination from the Hanford Nuclear Reservation. The researchers would capture the fish using electrofishing, hook and line, and long-line techniques. Any captured listed fish would immediately be released. The researchers do not propose to kill any listed fish but a small number may inadvertently be killed by the activities

Permit 10114-2R

Science Applications International Corporation (SAIC) is seeking to renew for five years a research permit that allows them to take juvenile and adult PS Chinook salmon, HCS chum salmon, and PS steelhead. The sampling would take place throughout the marine waters of Puget Sound, Hood Canal, and the Strait of Juan de Fuca. The Washington State Department of Ecology has identified—under the Puget Sound Initiative—bays throughout Puget Sound for focused, accelerated sediment cleanup and pollution source control. The purpose of the study is to develop work plans and conduct bay-wide sediment characterizations to identify contaminated

areas that would require cleanup under the Washington State Sediment Management Standards. The SAIC proposes to capture fish using otter trawls, beam trawls, beach seines, and crab pots. Adult salmonids would be identified by species, measured, and released. All other fish would be anesthetized, identified by species, measured for length, allowed to recover from the anesthetic, and released. Only the first 30 salmonids of each species would be measured; any others would be identified, enumerated, and released. This research would benefit listed species by helping minimize their exposure to contaminants during cleanup operations. The researchers do not propose to kill any of the listed salmonids being captured, but a small number may die as an unintended result of the activities.

Permit 15207 – 2R

The Oregon State University (OSU) is seeking a renewal of a permit that currently allows them to annually take all the listed salmonids in the Columbia Basin and Oregon coast covered by this notice. The research is designed to help managers assess the condition of rivers and streams in the 12 conterminous western states and evaluate and develop scientifically and statistically rigorous field protocols for assessing large rivers and their tributaries. The study was previously conducted under Permit 1559 - 4A and Permit 15207 and will benefit listed species by providing baseline information about water quality in the study areas and helping managers enforce the Clean Water Act in those river systems where listed fish are present. The OSU researchers would capture fish (using boat- and backpack electrofishing equipment) in randomly selected river reaches, sample them for biological information, and release them. The researchers will try to avoid adult salmonids, but some may be encountered. The researchers do not intend to kill any fish being captured but some may die as an unintentional result of the research activities.

Permit 16333-2M

The Northwest Fisheries Science Center (NWFSC) is seeking to modify a five-year research permit they currently hold. The modified permit would increase the amounts of take they are allotted and allow them to annually take CC, CVS, LCR, PS, SRW, SRF, SRSS, UCRS, and UWR Chinook salmon; CR and HCS chum salmon; CCC, LCR, OC, SO/NCC coho salmon; OL and SR sockeye salmon; CCV, CCC, LCR, MCR, NC, PS, SRB, SCC, SC, UCR, and UWR steelhead; and S green sturgeon. The NWFSC research may also cause them to take S eulachon, for which there are currently no ESA take prohibitions. All green sturgeon and eulachon take would be adult take, but the salmonid take could be either adult or sub-adult. The surveys would range from the US-Canada border to the US-Mexico border, take place at depths of 55m to 1,280m, and run from May through October each year. The purpose of the survey is to generate fisheries-independent indices of stock abundance to support stock assessment models for commercially and recreationally harvested groundfish species. The survey collects data on 90+ species contained in the Pacific Coast Groundfish Fisheries Management Plan (FMP) and is intended to fulfill the mandates included in the Magnuson-Stevens Sustainable Fisheries Act. The objectives of the survey are: (1) quantify the distribution and relative abundance of commercially valuable groundfish species; (2) obtain biological data from species of interest including length, weight, gender, and maturity; (3) determine age structures for FMP species; (4) record net mensuration and trawl performance data; and (5) collect oceanographic data. The NWFSC proposes to capture fish using bottom trawls. An "Aberdeen" style net with a small-mesh (1 1/2" stretched measure or less) liner in the cod end would be towed for about 15 minutes per tow. Acoustic instruments attached to the nets would record various aspects of their mechanical performance. Catches would be sorted by species or other appropriate taxon and

listed species processed first and released as soon as possible. The research would benefit listed species by increasing the understanding of the connections between various oceanographic conditions and fish survival in the marine environment. And that information, in turn, would be used to inform future decisions regarding listed species management and recovery. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the activities.

Permit 16335-2M

The NWFSC is seeking to modify a five-year research permit they currently hold. The modified permit would increase the amounts of take they are allotted and allow them to annually take sub-adult and adult CC, CVS, LCR, PS, SRW, SRF, SRSS, UCRS, and UWR Chinook salmon; CR and HCS chum salmon; CCC, LCR, OC, SO/NCC coho salmon; and OL and SR sockeye salmon. The NWFSC research may also cause them to take adult S eulachon, for which there are currently no ESA take prohibitions. The surveys would range from south of Monterey, California to the Dixon Entrance, Alaska/British Columbia—proceeding along the continental shelf and upper slope between June and September every year. Scientists from the NWFSC and Department of Fisheries and Oceans Canada (DFO) would jointly conduct biennial integrated acoustic and trawl (IAT) surveys on Pacific hake (Merluccius productus). The purpose of the IAT survey is to assess the distribution, abundance, and biology of Pacific hake. Age-specific estimates of total population abundance derived from the survey are key data for the joint U.S.-Canada Pacific hake stock assessments; they ultimately act as the foundation for advice on U.S., tribal, and international harvest levels. The NWFSC proposes to capture fish using an Aleutian wing 24/20 mid-water trawl. Surveys would be conducted in a series of transects generally oriented east-west and spaced at 10 nautical-mile intervals. Trawl samples would be used to

classify acoustic backscatter readouts by species and size. Catches would be sorted by species or other appropriate taxon and listed species would be processed and released before any other species. The research would benefit listed species by helping make the West Coast hake fishery more target-specific and thereby reducing bycatch of other species. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the proposed activities.

Permit 16337-2M

The NWFSC is seeking to modify a five-year research permit they currently hold. The modified permit would increase the amounts of take they are allotted and allow them to annually take sub-adult and adult CC, CVS, LCR, PS, SRW, SRF, SRSS, UCRS, and UWR Chinook salmon; CR and HCS chum salmon; CCC, LCR, OC, SO/NCC coho salmon; and OL and SR sockeye salmon. The NWFSC research may also cause them to take adult *S. eulachon*—for which there are currently no ESA take prohibitions. The surveys would range primarily from the Strait of Juan de Fuca Washington down to the central Oregon coast, though additional surveys may be undertaken that would range from south of Monterey Bay, California up to the Dixon Entrance, Alaska/British Columbia. Surveys would be conducted from June to early September and may run from as few as 30 days up to as many as 70. The purpose of these surveys is to investigate research topics suggested by hake stock assessment scientists, including: (1) comparing acoustic estimates for hake between two vessels, (2) conducting research on acoustic differentiation between hake and Humboldt squid (*Dosidicus gigas*), and (3) confirming that ground-truth tows (mid-water and bottom trawls) are adequately characterizing schools of hake. Other research may be conducted as well and may include hake target strength investigations, acoustic broadband research, and night tows for pelagic fish species. The cruises would test automatic underwater vehicles, acoustic systems, plankton sampling, and limited mid-water

trawling. The NWFSC proposes to capture fish using an Aleutian wing 24/20 mid-water trawl and a Poly Nor'eastern high-opening bottom trawl equipped with roller gear. Catches would be sorted by species or other appropriate taxon and listed species would be processed and released before any other species. The research would benefit listed species by helping make the West Coast hake fishery more target specific and thereby reducing bycatch of other species. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the proposed capture method.

Permit 16338-2M

The NWFSC is seeking to modify a five-year research permit they currently hold. The modified permit would increase the amounts of take they are allotted and allow them to annually take CC, CVS, LCR, PS, SRW, SRF, SRSS, UCRS, and UWR Chinook salmon; CR and HCS chum salmon; CCC, LCR, OC, SO/NCC coho salmon; OL and SR sockeye salmon; CCV, CCC, LCR, MCR, NC, PS, SRB, SCC, SC, UCR, and UWR steelhead; and S green sturgeon. The NWFSC research may also cause them to take S eulachon—a species for which there are currently no ESA take prohibitions. All take for take for green sturgeon and eulachon would be adult take, while salmon and steelhead take may be either subadult or adult take. The surveys would range from northern California to Washington over the continental shelf in waters shallower than 1,000m. The purpose of these surveys are to test and evaluate bycatch reduction devices (BRDs) and trawl gear modifications (i.e. headrope/footrope modifications) that are designed to reduce: (1) Chinook salmon and rockfish bycatch in the U.S. Pacific hake fishery; (2) Pacific halibut, sablefish, and rockfish bycatch in the groundfish bottom trawl fishery; (3) and juvenile and unmarketable-sized fish discards in mid-water and bottom trawl groundfish fisheries. The NWFSC proposes to capture fish using mid-water and bottom trawl nets. Catches

would be sorted by species or other appropriate taxon and listed species would be processed and released before any other species. The research would benefit listed species by helping make the West Coast hake fishery more target-specific and thereby reducing bycatch of other species. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the proposed capture method.

Permit 16702-2M

The NWFSC is seeking to modify a five-year research permit that currently allows them to annually take juvenile PS Chinook salmon and PS steelhead. The modified research would increase the amount of take the researchers are allotted and would also allow them to take adult S eulachon—a species for which there are currently no ESA take prohibitions. The survey sites would be located in the Snohomish River estuary. The purpose of these surveys is to monitor habitat use of juvenile PS Chinook salmon in response to estuary restoration at the Qwuloolt restoration site—both before and after the planned levee breach in late 2014. Specifically, the goals are to identify the life history types present, their spatial and temporal distribution, their feeding ecology, and interactions with other biota. Sampling would occur year-round: biweekly from February to September and then once a month from October to January. The NWFSC proposes to capture fish using beach seines (in mainstem habitat), pole seines (inside restoration site prior to breaching), and fyke traps (in tidal channels). The researchers would use MS-222 to kill up to 15 marked and unmarked juvenile Chinook and take stomach, otolith, and other tissue samples from them. Any PS Chinook unintentionally killed during the research would be used in lieu of a fish that would otherwise be sacrificed. All other juvenile PS Chinook and all PS steelhead captured would be measured (fork length), counted, and released. The research would benefit the listed species by helping improve salmon habitat restoration.

Permit 17798

The NWFSC is seeking a five-year research permit to annually take juvenile PS Chinook salmon and PS steelhead. The NWFSC research may also cause them to take adult *S. eulachon*—a species for which there are currently no ESA take prohibitions. The surveys would occur in biologically and chemically contaminated estuaries throughout Puget Sound (Skagit, Stillaguamish, Puyallup, Nisqually, Duwamish, Snohomish, and Deschutes river estuaries). The purpose of these surveys is to monitor chemicals of emerging concern (CEC) using molecular and physiological approaches that would identify bio-accumulative CEC in ecologically sensitive indicator species and determine the impacts of CEC exposure may be having on endocrine function and growth. The researchers would use whole genome and molecular techniques on various Chinook tissues to help identify gene pathways and develop robust diagnostic indices for CEC toxicity. The NWFSC proposes to capture and euthanize the fish so they can take blood, tissue, and organ samples for analyses. Excess Chinook (and all other species) would be released immediately after capture. The researchers would prioritize using adipose-fin-clipped hatchery fish and unintentional mortalities over unclipped or wild fish. The research would benefit the listed species by identifying CEC sites and sources and thereby helping inform decisions about how to best handle them in the future.

Permit 17839

The USFS is seeking a five-year research permit to annually take juvenile PS Chinook salmon and PS steelhead. The researchers would conduct Salish sucker surveys in the northern Puget Sound river drainages of the Nooksack, Skagit, and Stillaguamish rivers. Their purpose is to: (1) improve our knowledge about Salish sucker distribution by sampling preferential habitat types throughout their range in Northern Puget Sound and (2) refining our understanding of the

species' physical chemical habitat metrics. In the U.S., the Salish Sucker, endemic to five watersheds in Washington State, is not federally listed under the ESA. In Canada, the Salish sucker has been listed as endangered since 1987 under the Species At Risk Act (SARA). The USFS proposes to capture fish using minnow and feddes traps. Salmonids encountered would be identified by species, checked for an adipose fin clip, and immediately released downstream. The research would benefit the listed species by providing information on their distribution. The main benefactor of this research is the Salish sucker who are listed as endangered in Canada but not well understood in the U.S. For Salish suckers, this study would improve distribution knowledge, confirm critical physical habitat characteristics, quantify presence/absence in suitable habitat, confirm species persistence in known populations, and refine migratory life history by investigating the upper drainages. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the research.

Permit 17851

The Coastal Watershed Institute (CWI) is seeking a five-year research permit to annually take juvenile PS Chinook salmon, PS steelhead, and HCS chum salmon. The CWI research may also cause them to take adult S eulachon—a species for which there are currently no ESA take prohibitions. The survey would take place in the Elwha River estuary. The purpose of the research is to examine ecological function in the Elwha River nearshore environment with respect to determining how that environment supports fish species. The researchers would look at the population structures, migration timing, and life history strategies among local salmonids (Chinook, chum, sea-run cutthroat, steelhead, and bull trout) and measure ecological indices as well. The CWI proposes to capture fish using a beach seine. All fish would be identified by their lowest taxonomic level. Twenty 20 individuals from each species would be measured and

released. Salmonids would be scanned for fin clips and tags. The research would benefit listed species by generating information on the species' habitat needs and response to the removal of the Elwha and Glines Canyon dams. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the research.

Permit 18001

Pierce County, Washington, is seeking a five-year research permit to annually take juvenile and adult PS Chinook salmon and PS steelhead. The purpose of these surveys is to determine the distribution and diversity of anadromous fish species in water bodies adjacent to and within the county's levee system. The County proposes to capture fish using seines, dip-netting, minnow traps, fyke nets, hook and line, and backpack electrofishing. Electrofishing would largely be "spot-shocking" for presence and absence and would not typically cover broad, continuous areas. The fish would be captured, identified, measured, and then released at or near their capture site. Fish would not be removed from the water unless absolutely necessary. The research would benefit the listed species by helping Pierce County develop a best management practice program and establish in-water work windows that would minimize effects on listed fish during construction and restoration projects. The researchers do not intend to kill any listed fish, but some may die as an inadvertent result of the research.

This notice is provided pursuant to section 10(c) of the ESA. NMFS will evaluate the applications, associated documents, and comments submitted to determine whether the applications meet the requirements of section 10(a) of the ESA and Federal regulations.

The final permit decisions will not be made until after the end of the 30-day comment period.
NMFS will publish notice of its final action in the FEDERAL REGISTER.

Dated: April 22, 2013

Angela Somma, Chief, Endangered Species Division,
Office of Protected Resources, National Marine Fisheries Service

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